

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strike through~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claims 1, 4, 5 10 and 12-19 in accordance with the following:

1. (currently amended) A reference reason identifying apparatus, comprising:
 - a reference feature/reference reasons correspondence table indicating correspondence between ~~reference features~~ contexts of character strings and reference reasons;
 - a referred document extracting device extracting document information about a referred document from given document data;
 - a reference position extracting device extracting information about a position where the referred document is cited in the document data, and a ~~feature~~ character string in the neighborhood of the position;
 - an identification device obtaining a context of an extracted character string by performing language analysis of the extracted character string, and identifying a reason indicating why the referred document is cited by retrieving the reason from the reference feature/reference reason correspondence table using the ~~feature in the neighborhood~~ context of the position-extracted character string as a reference feature, the reason including at least one of answer, application, basic, contraposition, human, related work, review, software, technique, weak correlation and similar; and
 - an output device outputting output information including the information extracted by the referred document extracting device and the reason why the referred document is cited.
2. (previously presented) The references reason identifying apparatus according to claim 1,
 - further comprising a document information extracting device extracting document information about the document data from the document data, and
 - wherein said output device outputs the information extracted by the document information extracting device together with the output information.

3. (original) The reference reason identifying apparatus according to claim 1, wherein said identification device identifies the reason why the referred document is cited based on at least one of information about a chapter to which the position where the referred document is cited belongs and information about a character string in the neighborhood of the position where the referred document is cited.

4. (currently amended) A keyword extraction apparatus, comprising:

- a reference feature/reference reasons correspondence table indicating correspondence between ~~reference features~~ contexts of character strings and reference reasons;

- a referred document extracting device extracting document information about a referred document from given document data;

- a reference position extracting device extracting information about a position where the referred document is cited in the document data, and a ~~feature~~ character string in the neighborhood of the position;

- an identification device obtaining a context of an extracted character string by performing language analysis of the extracted character string, and identifying a reason why the referred document is cited by retrieving the reason from the reference feature/reference reason correspondence table using the ~~feature in the neighborhood context~~ of the ~~position extracted character string~~ as a reference feature;

- a keyword extraction device extracting keyword information of the referred document from information in the neighborhood of the position where the reference document is cited; and

- an output device outputting output information including the information extracted by the referred document extracting device, the reason why the referred document is cited and the keyword information.

5. (currently amended) An information retrieval apparatus, comprising:

- a document database device storing document data;

- a reference feature/reference reasons correspondence table indicating correspondence between ~~reference features~~ contexts of character strings and reference reasons;

- a reference correlation storage device storing a reference correlation including a context of an extracted character string obtained by performing language analysis of the extracted character string, and an indication of a reason for why a referred document is cited at a position in a specific document, the reason being retrieved from the reference feature/reference reason

correspondence table using a feature ~~the context~~ of the extracted character string in the specific document in the neighborhood of the position as a reference feature;

a retrieval device retrieving the document data stored in the document database device using the reference correlation stored in the reference correlation storage device; and
an output device outputting a retrieval result including the reference reason.

6. (previously presented) The information retrieval apparatus according to claim 5, further comprising:

a referred document extracting device extracting document information about the referred document from the document data of the specific document;

a reference position extracting device extracting information about a position where the referred document is cited in the document data of the specific document;

an identification device analyzing the information extracted by the reference position extracting device and identifying the reference category of the reason why the referred document is cited; and

a device storing information including the information extracted by the referred document extracting device and the reference category in said reference correlation storage device.

7. (original) The information retrieval apparatus according to claim 5, wherein said reference correlation storage device stores keyword information of the referred document extracted from the specific document, and

said retrieval device retrieves the document data using the keyword information.

8. (previously presented) The information retrieval apparatus according to claim 5, wherein said output device includes a display device graphically displaying the reference correlation based on the reference category.

9. (original) The information retrieval apparatus according to claim 5, wherein said output device includes a display device displaying the reference correlation in a time series.

10. (currently amended) A document classifying apparatus, comprising:

a referred document extracting device extracting document information about a referred document from given document data;

a reference feature/reference reasons correspondence table indicating correspondence between ~~reference features~~ contexts of character strings and reference reasons;

a reference position extracting device extracting information about a position where the referred document is cited in the document data, and a ~~feature~~ character string in the neighborhood of the position;

an identification device obtaining a context of an extracted character string by performing language analysis of the extracted character string, and identifying a reason why the referred document is cited by retrieving the reason from the reference feature/reference reason correspondence table using the feature in the neighborhood ~~context~~ of the ~~position~~ extracted character string as a reference feature;

a similarity identification device calculating a similarity in reference correlation based on the reason indicating why the referred document is cited, between a plurality of pieces of document data, and classifying the plurality of the pieces of the document data; and

an output device outputting a classification result.

11. (previously presented) The document classifying apparatus according to claim 10, further comprising a keyword extraction device extracting keyword information of the referred document from information in the neighborhood of the position where the referred document is cited, and

wherein said similarity identification device classifies the plurality of the pieces of the document data using the keyword information.

12. (currently amended) An information retrieval apparatus, comprising:

a database device storing information to be retrieved;

a reference feature/reference reasons correspondence table indicating correspondence between ~~reference features~~ contexts of character strings and reference reasons;

a reference correlation storage device storing a reference correlation including a context of an extracted character string obtained by performing language analysis of the extracted character string, and an indication of a reason for why referred information is cited by a specific piece of information at a position in a document, the reason being retrieved from the reference feature/reference reason correspondence table using a feature in the neighborhood ~~the context~~ of the ~~position~~ extracted character string as a reference feature;

a retrieval device retrieving information stored in the database device using the reference correlation stored in the reference correlation storage device; and

an output device outputting a retrieval result including the reason for citing the referred information.

13. (currently amended) A computer-readable storage medium on which is recorded a program enabling a computer to execute a process, said process comprising:

- extracting document information about a referred document from given document data;
- extracting information about a position where the reference document is cited in the document data, and a feature-character string in the neighborhood of the position;
- ~~analyzing-performing language analysis of the extracted character string to obtain a context of the information-character string~~ extracted by the reference position extracting device;
- retrieving a reason indicating why the referred document is cited from a reference feature/reference reason correspondence table, which indicates correspondence between ~~reference-features-contexts of character strings~~ and reference reasons, using the ~~feature-in-the neighborhood-of-the-position-context of the character string~~ as a reference feature; and
- outputting output information including the information about the referred document and the reason why the referred document is cited.

14. (currently amended) A computer-readable storage medium on which is recorded a program enabling a computer to execute a process, said process comprising:

- retrieving document data stored in a document database using a reference correlation including a context of an extracted character string obtained by performing language analysis of the extracted character string, and a reason indicating why a referred document is cited at a position in a specific document, the reason being retrieved from a reference feature/reference reason correspondence table, which indicates correspondence between ~~reference-features-contexts of character strings~~ and reference reasons, using ~~a feature-the context of the extracted character string in the~~ specific document in the neighborhood of the position as a reference feature; and
- outputting a retrieval result including the reason why the referred document is cited.

15. (currently amended) A computer-readable storage medium on which is recorded a program enabling a computer to execute a process, said process comprising:

- extracting document information about a referred document from given document data;
- extracting information about a position where the referred document is cited in the document data, and a feature-character string in the neighborhood of the position;

analyzing the information about the position where the referred document is cited;
identifying a context of the character string obtained by performing language analysis of the extracted character string, and a reason indicating why the referred document is cited by retrieving from the reference feature/reference reason correspondence table using the feature context of the character string in the neighborhood of the position as a reference feature;
calculating a similarity in reference correlation based on the reason why the referred document is cited, between a plurality of pieces of document data; and
outputting a result including the reason for citing the referred document.

16. (currently amended) A reference reason identifying apparatus, comprising:
reference feature/reference reasons correspondence table means for indicating correspondence between ~~reference features~~ contexts of character strings and reference reasons;
referred document extracting means for extracting document information about a referred document from given document data;
reference position extracting means for extracting information about a position where the referred document is cited in the document data, and a ~~feature~~ character string in the neighborhood of the position;
identification means for obtaining a context of the character string extracted by said reference position extracting means, by performing language analysis of the character string, and identifying a reason indicating why the referred document is cited in the referring document by retrieving the reason from the reference feature/reference reason correspondence table means using the ~~feature in the neighborhood of the position~~ context of the character string as a reference feature; and
output means for outputting output information including the information extracted by the reference document extracting means and the reason why the referred document is cited.

17. (currently amended) An information retrieval apparatus, comprising:
document database means for storing document data;
reference feature/reference reasons correspondence table means for indicating correspondence between ~~reference features~~ contexts of character strings and reference reasons;
reference correlation storage means for storing reference correlations including contexts of character strings obtained by performing language analysis of the extracted character string, and an indication of a reason for why a referred document is cited at a position in a specific

document, the reason being retrieved from the reference feature/reference reason correspondence table means using a ~~feature of the specific document in the neighborhood of the position~~ context of an extracted character string as a reference feature;

retrieval means for retrieving the document data stored in the document database device using the reference correlation stored in the reference correlation storage device; and
output means for outputting a retrieval result including the reference reason.

18. (currently amended) A document classifying apparatus, comprising:

referred document extracting means for extracting document information about a referred document from given document data and a position where the referred document is cited in the document;

reference feature/reference reasons correspondence table means for indicating correspondence between ~~reference features~~ contexts of character strings and reference reasons;

reference position extracting means for extracting information about a position where the referred document is cited in the document data, and a ~~feature~~ character string in the neighborhood of the position;

identification means for obtaining a context of an extracted character string by performing language analysis of the extracted character string, and identifying a reason indicating why the referred document is cited, by retrieving the reason from the reference feature/reference reason correspondence table means using the ~~feature in the neighborhood context~~ of the position-extracted character string as a reference feature;

similarity identification means for calculating a similarity in reference correlation based on the reason why the referred document is cited, between a plurality of pieces of document data, and classifying the plurality of the pieces of the document data; and

output means for outputting a classification result.

19. (currently amended) A keyword extraction apparatus, comprising:

a keyword storage storing a keyword of each piece of document data;

a referred document extracting device extracting document information about a referred document from given document data;

a first pattern data list storage device storing pattern information including numeral patterns and indicating chapter numbers;

a second pattern data list storage device storing pattern information including character string patterns likely to appear in the given document data and indicating documents that are cited;

a reference position extracting device searching the document data for a pattern which matches one of the numeral patterns stored in said first pattern data list storage device, checking whether numerals contained in searched patterns increase consecutively as the document data are searched, and extracting information about a position where the referred document is cited in the document data by searching the document data for a pattern which matches one of the character string patterns stored in said second pattern data list storage device if the numerals increase consecutively;

a keyword extracting device extracting keyword information of the referred document from information in the neighborhood of the extracted position; and

a keyword storing device storing the keyword information as a keyword of the referred document in the keyword storage.